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MAGSAT  
SUBJECT: Quarterly Progress Report - October, November and December, 1982

DATE: December 30, 1982

Progress has continued on all phases of the research program for the period October, November and December, 1982. Three papers involving satellite elevation magnetic anomaly maps, prepared by our group, were presented at the 1982 Society of Exploration Geophysicists annual meeting in Dallas during the week of October 17-21. These papers were entitled "Satellite Magnetic Anomalies of Africa and Europe" by R. Olivier, J.J. Hinze and R.R.B. von Frese, and "Relation of MAGSAT Anomalies to Main Tectonic Provinces in South America" by D.W. Yuan, E.G. Lidiak, G.R. Keller and M.B. Longacre. The first two papers are currently being documented for publication. In addition, a paper entitled "Regional Geophysical Analysis of Mississippi Embayment Crustal Structure" by R.R.B. von Frese is being prepared for presentation at the annual meeting of the Society of Mining Engineers of the American Institute of Mining Engineers (SME-AIME) to be held in Atlanta, GA on March 6-10, 1983. This paper will present a detailed integrated regional gravity and magnetic anomaly model for the deep crustal structure of the embayment.

The problem of inverting 2°-average MAGSAT scalar anomalies for the region 80°W, 60°E longitude and 40°S, 70°N latitude has been attempted on the LARS computer. However, the effort was aborted due to insufficient allocation of CPU-time. This problem is currently being resubmitted and should be implemented shortly for quantitative comparison with free-air gravity anomaly, geothermal, and tectonic data.

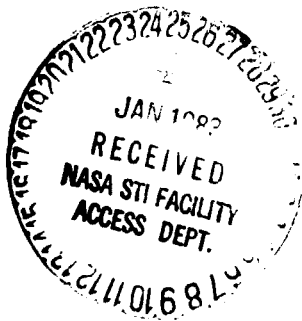
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